



2018 RICAS Grades 3-8 Mathematics Test Design Information

This document describes the 2018 RICAS Mathematics test designs, question types, and other information related to the mathematics test.

Number of Sessions and Calculator Use

All mathematics tests will have two sessions.

Grades 3–6: No calculators are allowed for either session.

Grades 7–8: No calculators are allowed in Session 1.

Calculators are allowed in Session 2.

Item Types

The table below contains information about the question types on the tests.

Item Type	Total Points	Grade Levels
Multiple Choice: <i>Students select one correct answer from among several answer options.</i>	1	Grades 3–8
Multiple Select: <i>Students select more than one correct answer from among several answer options.</i>	1	Grades 3–8
Technology Enhanced <i>Students taking the computer-based tests answer questions using technology such as drag-and-drop and hot spot.</i>	1	Grade 3
	1 or 2	Grades 4–8
Short Answer/Fill-in-the-Blank <i>Students construct a short written response, typically only a word or a number.</i>	1	Grades 3–8
Constructed Response <i>Students write a response to a multi-part item that includes calculations and explanations to a problem or set of problems.</i>	3	Grade 3
	4	Grades 4–8

Test Design

Each test includes both common and matrix questions. Common questions count toward a student's score, while matrix questions consist of both field-test and equating questions and do not count toward a student's score.

Common Questions

Students will complete a range of question types as described above. Information about the number of questions by points is in the table below.

Grade	Number of 1- Point Questions	Number of 2-point Questions	Number of Constructed Response Questions	Total Points on Tests
3	36	0	4	48
4-8	34	2	4	54

Matrix Questions

In addition to common questions, students will answer matrix (field test and equating) questions that will vary by grade:

- Students in grade 3 will answer three additional 1-point questions and one additional constructed-response question.
- Students in grades 4–6 will answer three additional 1- or 2-point questions and one additional constructed-response question.
- Students in grades 7–8 will answer four additional 1- or 2-point questions and two additional constructed-response questions.

Reporting Categories and Percentage of Points

The reporting category percentages for each grade are in the tables below.

Reporting Category Percentages (+/-5%) for Grades 3-5			
	Grade 3	Grade 4	Grade 5
Operations & Algebraic Thinking	30%	20%	15%
Number & Operations in Base Ten	15%	20%	30%
Number & Operations-Fractions	20%	30%	25%
Measurement & Data	25%	20%	20%
Geometry	10%	10%	10%

Reporting Category Percentages (+/-5%) for Grades 6-7		
	Grade 6	Grade 7
Ratios & Proportional Relationships	20%	20%
The Number System	20%	20%
Expressions & Equations	30%	25%
Geometry	15%	15%
Statistics & Probability	15%	20%

Reporting Category Percentages (+/-5%) for Grade 8	
The Number System and Expressions & Equations	40%
Functions	20%
Geometry	30%
Statistics & Probability	10%

RICAS Resource Center

To access practice tests, tutorials, test administration manuals, etc., please visit the [RICAS Resource Center](#).

Note: Rhode Island is administering the MCAS assessments and referring to them as RICAS. Selected resources may be linked to the MCAS website and contain the MCAS branding for the 2017-2018 school year.

2017 Released Items

Computer-scored released items can be accessed via the [RICAS Resource Center](#). Scoring rubrics and student work for the constructed response released items are available via the [Question Directory for Student Work](#) on the Massachusetts Department of Education website. [Directions](#) for using the online tool are provided.

Mathematics Reference Sheets

Two types of mathematics reference sheets are available for RICAS. The standard reference sheets are provided on the TestNav8 platform for all students in grades 5 – 8. The supplemental mathematics reference sheets are available as an accommodation for students in grades 3 – 8. Copies of both types of reference sheets are posted on the [RICAS Assessment](#) page of our website. Teachers are encouraged to make regular use of these resources so students gain familiarity with them.